

MARINE REVIEW.

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No. 18.

Ore Sales and the Freight Situation.

A feature of importance in the ore market is a statement from officers of the Republic Iron Company to the effect that the bulk of their product for the coming season has been sold at \$5.50 for No. 1 Specular, or a full dollar a ton below last year's prices. The announcement has had no bearing on the lake freight situation, however, as it has not been learned that other ore companies have made any sales of consequence, outside of those already announced by the sales agents of the Norrie and Ashland mines, and which were covered in part by a lake freight rate of \$1 a ton for season contracts from Ashland. It is reasonably certain that two boats, one of them the schooner J. G. Masten, have been chartered for a first trip from Escanaba at 80 cents, and two others, the Bradley and consort now on the way down, get not less than 70 nor more than 80 cents. These are extreme cases, however, in which there was a desire on the part of the shippers to bring down special grades of ore, and the wild rate from Escanaba can not be considered settled as yet.

Ore sales made so far are subject to a provision that has prevailed in the trade to some extent for two or three years past, and which has caused some talk of the transactions being "conditional" on account of the custom not being generally known. It is an understanding between the seller and the purchaser that the latter shall receive the benefit of any reduction in price that may be made during the season of delivery. A furnace owner buys, for instance, 50,000 tons of ore at this time and there is delivered by July 1, when a reduction of 25 cents a ton is made, only 25,000 tons. The furnace owner accordingly receives a reduction of 25 cents a ton on the remaining 25,000 tons. The Republic company's sales in advance of most other companies will be understood by the trade, as the ore is one of the special high grade ores. Still, there is no report of sales from the Lake Angeline or other mines of this class and there is no telling how long the purchasers of hard ores will remain out of the market. The individual vessel owners who can see little inducement in dollar ore from Ashland are still disinterested, agreeing to take chances on a poor season, and the great majority of the ore carriers will remain in port until about May 15, notwithstanding that a few boats chartered for grain from the head of Lake Superior are about ready to move, having broken away from the contract signed some time ago. Even the vessels controlled by the ore companies are being held back.

The outlook in coal freights is more encouraging, now that it is as well as settled that there will be no strike of the bituminous coal miners of Ohio and Pennsylvania on May 1, in sympathy with the eight hour movement. There is still some question about wages, the operators seeking a reduction from last year's rates of 72 cents in the Pittsburgh district and 79 cents in the Hocking valley, on account of competition from the mines of Indiana and Illinois, where no agreement exists between miners and operators for the adjustment of wages and where the operators have profited on this account. This question of wages is far less serious than that which has troubled the bituminous trade for several weeks past and will, it is thought, be settled in time to permit of another season without labor difficulties. The northwest is practically without stocks of either hard or soft coal, the surplus being smaller than at any time for a number of years past, and the movement by lake will in all probability be fully equal to that of last season, which was the greatest in the history of the trade. All boats desiring coal cargoes from Ohio ports are now provided for and the rates remain unchanged at 50 cents to the head of Lake Superior, 60 cents to Chicago, 50 cents to Milwaukee, 55 cents to Portage, 45 cents to Lake Huron, 35 cents to St. Clair river ports and 30 cents to Detroit.

The Big Ashtabula Docks.

Construction work on the new docks of the Lake Shore Railway Company at Ashtabula, which will add about 1,000,000 tons to the iron ore storage capacity of that harbor, is progressing favorably, although it is not known as yet when the project will be completed. A settlement has not been reached in the matter of equipment of the docks with hoisting and conveying machinery, which will involve a very large expenditure of money and is almost as important as the construction. These docks, as well as the ownership of the four big wooden boats about to be launched from the shipyard of Capt James Davidson, of West Bay City, are involved in the undertakings of Ferdinand Schlesinger, whose financial losses in connection with the sale of the Chapin iron mine and the new Michigan ore road to Vanderbilt interests and M. A. Hanna & Co., of Cleveland, have been freely discussed. Mr. Schlesinger is still negotiating for the addition of the steamboats building at West Bay City to the Inter State Transit Company, an ore carrying corporation in which he still retains an interest, and also for the equipment and management of the dock under lease from the railway company, in accordance with original plans. Whether he will be successful in this or not is a question but the matter will be settled in a few days. In any event it can be said of the projects undertaken in the name of what was known as the "Schlesinger syndicate" that they will result in a great increase in the business of the lakes that will be felt more in a few seasons to come. Had it not been for the Schlesinger schemes, all of which are perfectly practicable and will undoubtedly result in big profits to the capitalists into whose hands they have fallen for completion, the terminal facilities at Escanaba and on Lake Erie would remain inadequate to the demands that must follow the present slump in this branch of lake business.

Charges for Loading and Unloading Ore.

Messrs. B. L. Pennington, M. A. Bradley and W. D. Rees, members of the Cleveland Vessel Owners Association appointed to ask for a reduction in the charges for unloading ore at Lake Erie ports, were informed by the lessees of the Cleveland docks after a meeting held recently that the cost to vessels during the coming season will be 16 cents a ton, instead of 18 cents charged last season. It is expected, of course, that this reduction will be general, on account of the low freight rates. A settlement of wages between the dock managers and the men employed in unloading the ore has not been announced as yet, and it is not probable that there will be anything definite in this regard until the arrival of ore laden vessels. It is expected that the trimmers at ore shipping ports will make a uniform rate of 3½ cents a ton, but there is no official announcement of this as in the case of unloading.

The French are equipping their ironclads with a system of telephones to enable communication to be maintained between the various parts with greater facility than by the use of speaking tubes.

Shipbuilding for local business received quite a boom on Puget Sound during the past year, twenty-three steamships, one bark, fifteen schooners and two sloops having been launched, besides a number of scows and barges. The gross tonnage of the vessels launched was 5,791.67.

Look to the Eleven-Foot Shoal Light.

There is not on the whole chain of lakes a more important passage-way than the entrance to Green bay, Lake Michigan, where Escanaba, the greatest iron port of the world is situated. Although the output of ore this season will be greatly reduced, it is more than probable that the shipments from this port, on account of the new docks being erected there, which will be the largest ever built in this or any other country, will be almost equal to last season's aggregate of 3,756,142 gross tons.

The ore and vessel interests have been engaged in an effort to secure a light station on Eleven-Foot shoal at the entrance to Green bay and the progress made in this regard should not be overlooked when the next congress assembles, whether legislative matters are to be looked after by the Lake Carriers' Association or not. The sundry civil act of August 30, 1890, contained an appropriation of \$60,000 for the establishment of a light station at this point but the work has not been begun on account of the appropriation being inadequate. At the last session an effort was made to have the act of March 3, this year, contain a provision that would permit of the appropriation of \$60,000 being used for the construction of light-ships, as had been done in the case of an appropriation made for Simmon's reef, in which the conditions were similar. The effort was begun a little late, however, and was lost in the rush of business that marked the close of the session. Still it must be plain to everyone concerned that the appropriation of \$60,000 for a light-station can properly be construed as covering the necessary expenditure for a temporary light. The act does not say what kind of a light-station it shall be—whether floating or fixed. As shown in the case of the boats now under construction in Toledo for Simmon's reef, the \$60,000 would build four light-ships, or very nearly, and even drawing upon this sum for \$1,000 or \$1,500, as may be necessary for the maintenance of the light-ships for the first season, there still would be plenty left for not less than three ships. There is no hope of securing a temporary light of any kind at this point for the present season, but the matter should be borne in mind when the next congress assembles and the situation made plain to the light-house board in time for action.

The Lakes Have Their Share of Them.

France thinks of permitting—officially—the employment of foreigners on her merchant vessels. Russia is about to adopt measures to prevent any foreigners being engaged in her merchant service. England is worried over the large proportion of foreigners in her merchant shipping. The United States has laws restricting any but citizens from being officers on its vessels. The foreigner is struck at from all sides, each country wanting only its own gallant tars, but in almost every merchant navy the foreigner is largely in evidence, claiming always to be a native or a citizen, and his name is generally Jans Andersen, hailing from that breeding place of seamen, Scandinavia.—*Maritime Register.*

How a Cofferdam Leak was Stopped.

EDITOR MARINE REVIEW:—I am in receipt of yours of the 25th inst., asking "for a description of the boring and stock-ramming process through which the leak in the cofferdam at Sault Ste. Marie was found and stopped," and take pleasure in making the following reply:—

The cofferdam referred to consists of a clay wall having a minimum thickness of eight feet. This clay wall is supported on each side by a line of crib-work filled with stone, and therefore pervious to water. A portion of the dam extends from the west end of the north wall of the present lock up-stream along the middle of the canal for about 580 feet, and then turns squarely into the north bank of the canal. The leak occurred about 100 feet east of where this turn is made, and was situated entirely beneath the crib-work, the bottom of which, at the site of the leak, was 22½ feet below the surface of the water in the canal. The crib-work was not disturbed. At the deepest point the leak was at least four feet below the bottom of the crib, therefore 26½ feet below the level of the water in the canal, or about 9 feet lower than the level of the water in the river below the lock.

The rush of water underneath the dam was so great that bales of hay

and gunny-sacks filled with clay thrown into the cavity were carried through. By driving sheet-piling on the down-stream side of the space from which the clay wall had been carried away, a sufficient obstacle was established to prevent hay in bales and clay in sacks from being washed through, and after some two thousand sacks of clay had been thrown in it became possible to fill the gap with loose clay. But the leak still remained too large for the pumps to handle, and to further reduce it, as well as to get something into place more substantial than the sheet-piling which had been driven at first, timbers twelve inches square, sharpened to a chisel edge at the lower end, and shod with iron to the extent of the ability of the entire blacksmith force at the Sault to manufacture, were driven with a 1,900-pound ram between the sheet-piling and the crib-work, until they could be driven no further, when it was assumed that they were in contact with the rock formation, and a note made of the depth to which they had gone. The clay wall was then loaded with heavy piles of stone to compress it and the result was a reduction of the leak to such a degree as to bring it easily within the control of the pumps, and nineteen days after the break the lock-pit was again empty of water. The volume of water in the pit was about 45,000,000 gallons and this, in addition to the leakage, was handled by the pumps in less than seven days.

Although the pumping capacity available was sufficient to easily keep the lock-pit empty, it was still very desirable that the leak should be entirely stopped, and it was believed that this could be done very soon after its exact location was ascertained. To find the crevice in the rock through which the water was passing, an iron rod was driven down through the clay wall, in front of and close to the timbers already referred to, until it would go no further. The depth to which it penetrated was compared with the depth to which the timber had been driven, and the proper notes were made concerning any effect upon the muddiness of the leak. The rod was then withdrawn, moved laterally an average distance of eight inches, and again driven to the rock. This operation was continued until at one place the rod went two and a half feet deeper than at a distance of eight inches on either side of it. Here then was the crevice sought, and the next thing to be done was to fill it with clay or other water tight material. It was nearly 30 feet below the top of the clay wall, and more than 26 feet below the level of the water in the canal. It was not practicable to excavate down to it, and no other mode than that known as "stock-ramming" seemed available by which to put the clay "where it would do the most good."

Stock-ramming consists simply in driving a tube of requisite diameter to such depth that its lower end will be at the point where it is desired to deposit the clay or other impervious material, and then forcing such material through it in such quantity as may be necessary. In this particular case the tube used is an iron pipe. An iron rod is used as a piston, and this piston is driven down by a pile-driver, the clay with which the pipe had been filled being forced out at the lower end. When the piston has reached the lower end of the pipe it is withdrawn, the pipe is again charged with clay, and the operation of forcing it out is repeated. This is continued until the clay rammed in forces upwards the whole column of clay above it, when, as is obvious, the operation can be carried no further.

The whole operation is a simple one, and resembles nothing else so much as stuffing sausages, which, I dare say, first suggested its use many years ago.

The leak had been stopped before the ice had been gotten out of the canal. As soon as the canal could be cleared of ice, the movable dam was double-battened, the valves of the lock were opened, and for the first time since the completion of the present lock the water was drawn off from that portion of the canal below the movable dam. More than half the bottom was laid bare. The withdrawal of the water from the canal of course reduced the upward pressure upon the clay wall of the cofferdam, and the mass of clay, 30 feet high, compressed under its own weight as much as eighteen inches in the case of the new clay put in at the site of the leak.

The successful manner in which this leak was dealt with greatly increases our confidence in our ability to control any which may occur in future, but it does not remove our anxiety. That will abide with us until we no longer need the dam. But we regard the dam as now better than ever before, and the experience gained will enable us, in case of any future leak, to apply the most efficient remedial measures in the shortest possible time.

It was never supposed that a work like this could be carried on, under all the surrounding conditions, without great difficulty, and many annoyances. But for the necessity of providing for navigation while the new work is in progress, the work would be simple enough. All the trouble we have thus far encountered has arisen from this necessity.

Very respectfully, O. M. POE,

U. S. Engineer Office, Detroit, Mich. { Colonel, Corps of Engineers,
Bvt. Brig. General, U.S.A.

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Insurance Matters—Chicago Marine.

Special Correspondence to the MARINE REVIEW.

CHICAGO Ill., April 30.—Of course every vesselman around the lakes is watching with a great deal of interest the course of grain freights out of Chicago. They would give a good deal to know how long the present stock in Chicago elevators will hold out. On Monday, when the receipts of corn jumped up to a remarkable large figure for this season, many people thought that the good time was coming when there would be plenty of corn to carry. But Tuesday, in some way, all the corn that had come in Monday disappeared, without giving shippers a chance to hardly get a look at it; orders for corn poured in upon Chicago shippers from New York, Baltimore and other eastern points; the shippers tried in vain to get the corn to fill the orders. Thus several boats that had been upon the market for a number of days, were again left over. Shippers say that the movement of corn will not be materially increased and that a large part of the wheat now here will continue to stay here for some time. They do not think that much shipping will be done through May. Vessel agents hope for the best but are a discouraged lot of men.

The general insurance agents who have their offices in Chicago had a troublous time of it this week. They had cut rates but the cut rates brought no increase in business. The other fellows did the same, and then they were no better off than they were before. Nothing breaks the heart of the marine underwriters so completely as the prospect of doing business at rates that do not promise a big profit. This, the cuts threaten to annihilate, and so on Tuesday telegrams were flying between general offices at Detroit, Milwaukee, Buffalo and Chicago asking for a meeting in which an endeavor might be made to patch up peace and restore the tariff, so solemnly adopted early in the spring and so easily broken. It may be before this letter is in print, the meeting may have been held and everything patched up nicely, but if it is I venture the prediction that it will not be a fortnight before the trouble breaks out afresh. One of the most troublesome questions before the meeting will be "Inland Lloyds" for 1891. Since it appeared protests of vesselmen have become so strong that Manager McLeod had been constrained to consider the advisability of reviewing the work. As a vast amount of insurance has been done on the basis of the book, it is difficult to see how any revision can now take place without creating more trouble than the original undervaluations did. It will be much easier to let the thing go through this year and then rectify what mistakes have been made next winter, at the same time exercising more caution in an apparently reckless reduction of floating property. In saying this, it does not necessarily mean that Capt. McLeod had been guilty of recklessness. There was a committee, and whenever you find a committee and soon afterwards find a botch in any piece of work that it may have done, you can depend upon it you can never locate the responsibility. So it is in this case, all that there is to be done is to get along in the best way possible this season and then appoint no committee next year. If Capt. McLeod has not the ability and the judgment to make ratings for the register, the best thing the underwriters can do is to hire some one that has and let him do the work. I believe Capt. McLeod has both, and that it was the committee who played hide and seek with the values and classings of some Chicago boats.

The marine interests of this city are determined that the bridge placed at Canal street by the Cregier administration against the unanimous protest of lake interests shall be removed. Beaten in the council, they will now make their fight before the drainage board, which last week assumed the control of the river as the part of the drainage district in which Chicago is situated. The drainage board claims to have full power to remove any obstruction in the river and its chairman told the delegation of vesselmen, Tuesday, that the board will order the removal of the bridge if it could be shown that it was an obstruction to the flow of water in the river and to navigation. This the vesselmen can easily prove and if the board acts up to its promises, it will be compelled to lock horns with the city and remove the bridge. It will be a very pretty fight between the drainage board and the city authorities. Fortunately for the vesselmen Mayor Cregier, who was an ardent advocate of the bridge project, is no longer in power and the new mayor is free to act without any entanglements of the past.

One of the brightest young men in the lake passenger business out of Chicago, is G. S. Whitslar, general passenger agent of the Graham & Morton Transportation Company, plying between here and St. Joseph, Mich. Mr. Whitslar was formerly a newspaper man at Youngstown, Ohio, and came here a year ago as press agent for Graham & Morton. He did so well in working up excursions and handling passengers last year, that this year he was made general passenger agent and given charge of the line's passenger business and local freight business out of this port. The line is now making a great bid for through traffic to Michigan points by its lake and rail route, and will make quite a ripple in Michigan transportation before the season is over.

Remarkably fine posters giving a beautiful picture of the Virginia, which is to be launched at Cleveland next Saturday, now adorn a thousand

dead walls in Chicago; they are in hotels, in the depots and everywhere else that John Singleton, general passenger agent for the Goodrich Line, could locate. I do not know what the builders of the Virginia are claiming for her, but the passenger agent claims she will make 22 miles an hour, rain or shine, and in her general appointment, will be the finest boat carrying the American flag. The fleet of Goodrich steamers that have replaced the old timers since young Mr. Goodrich has become the head of the company, is certainly a fine one. The increase of clerks in the office, and the busy times they put in, is ample evidence that a large increase of business has followed the adoption of modern steamers for passenger traffic on this lake. The prediction can be safely made that the Virginia will be as good paying property as there is on Lake Michigan. The run between here and Milwaukee is one that depends solely on its attractiveness for securing patronage. Hundreds of people this season, will ride upon the Virginia for the mere purpose of riding upon an elegant boat. Otherwise, they would never have gone near the Goodrich docks.

One of the popular insurance men of Chicago is George L. McCurdy who represents the Insurance Company of North America on the lakes. The name of the company speaks for itself. HOMER J. CARR.

Buffalo Port Gossip.

Special Correspondence to the MARINE REVIEW.

BUFFALO, N. Y., April 30.—Manager McLeod has been sailing in hot water ever since the new Inland Lloyds Vessel Register has been out. He has received many warm complaints from owners because of the very radical reductions made in the valuations inserted in the volume. These run from 10 to 50 per cent., and almost every vessel recorded is affected. It is true that valuations in many instances had been higher in previous registers than was warranted, but no one looked for a general and decided mark-down. Capt. McLeod, however, is not altogether to blame for this record of depreciation. The general agents had decided that values must come down, and appointed a committee to carry out their ideas. One of the appraisers was Capt. W. D. Robinson, a former compiler of the Lloyds Register, a man well posted on vessel affairs, and who has positive notions as to values; another was Mr. Peck, of the Detroit Dry Dock Company, and the third was Capt. McLeod. The latter has acknowledged that in numerous cases his fellow appraisers fixed values lower than he wished to go. His idea was to put the best of the old canal schooners at \$6,000 instead of \$5,500.

Here it is understood that the first cut in hull rates was made by a local agent on a tow owned in Toledo for a Chicago general agency which has several foreign companies for their first season on the lakes. Then other general agents, to keep their commissions coming in, had to hold out bait, and so the tariff went all to pieces. Risks are now taken at from 10 to 30 per cent. under schedule rates. Well, this will save a few dollars to owners, and goodness knows they will need a heap of saving to make them come out whole this season.

Although the much vaunted May 15 agreement has followed in the wake of the hull tariff, local owners who signed it are not anxious to start out their boats. Not because they have any respect left for that hold-back arrangement, but because they can not see any freight that is worth picking up. With 14 feet of water at the Soo, there is no money in 2½ cent wheat from Duluth; Chicago grain freights are just as bad, and the iron ore traffic has not yet opened. Coal freights are not inviting, either. Several owners here talk as if it were hardly worth while to fit out at all.

Only three firms are shipping coal. The others are not yet in shape to move stock. It's lucky that the Lake Michigan fleet is coming down in a straggling fashion. The only change during the week has been a decline of 10 cents in the Toledo rate. In canal grain freights there has been absolutely nothing doing. About all the grain coming from Chicago is going east by rail. A large amount of grain from Duluth and Superior has been placed for canal shipment at 3¼ cents. The first of this will be here by next Monday. The canal will be opened next Tuesday.

Official Numbers and Tonnage.

The following official numbers were assigned lake vessels by the bureau of navigation, W. W. Bates, commissiouner, during the week ending April 25: Sail—Red Cloud, Detroit, Mich., tonnage, gross 9.26, net 8.80, No. 110,908; Steam—Bon Noyage, Grand Haven, tonnage, gross 500.26, net 360.85, No. 3,497; City of Paris, Port Huron, tonnage, gross 2,062.55, net 1,714.39, No. 126,722; Thomas F. Madden, Buffalo, tonnage, gross 17.85, net 8.93, No. 145,582.

Up along the shores of Lake Nepigon, which is 30 miles by an air line north of Lake Superior, many of the Indians lay up whitefish for winter. They catch them in nets and cure them by frost. They do not clean them. They simply make a hole in the tail end of each fish, and string them, as if they were beads, upon sticks, which they set up into racks. They usually hang the fishes in rows of ten, and frequently store up thousands.—Harper's Weekly.

Another Ruling on the Welland Rebate.

Special Correspondence to the MARINE REVIEW.

KINGSTON, Ont., April 30.—The government has replied to the petition of the corn exchange regarding the rebate on canal tolls. It rules that the rebate on toll rates on the Welland canal shall apply to cargoes which have broken bulk before entering the Welland canal and which are re-shipped after passing through, as is often the custom. For instance, barges arriving grain laden at Port Colborne, on Lake Erie, frequently have to send a portion of their cargoes by rail across the Niagara isthmus to Port Dalhousie on Lake Ontario, and thus lightened in draught, go through the Welland canal and re-ship the rest of their cargo at Port Dalhousie on the other side.

Calvin & Co.'s first raft of the season, containing ten drams, has made a start for Quebec. It won't take long to carry all the timber that is to be moved this year.

The new steamer North King, formerly the Norseman, will not be ready for her route across the lake from Charlotte before the end of May.

The Cornwall canal opens for traffic on May 4. It is expected that several steamers will be waiting on this side for passage.

Diver Charles, while at work in the harbor recently, met with an accident on the bottom and shot to the top like a corked bottle, but with feet up and head down. He was hauled in after floating about for some time.

W. Strong, civil engineer on the new dry dock, died on Saturday. He was one of the best engineers in the employ of the government.

The Glengarry and tow, including the large schooner Minnedosa, leaves this week for Duluth for cargoes.

M. Chabat, manager of the Mail line, is here looking after the steamers. It looks as if the Corsican will not be ready before the middle of the summer. The delay in getting in the boilers has greatly irritated the managers.

There are several timber trade vessels here but it looks as if they will lie idle for some time yet.

Latest Addition to the Toledo Fleet.

Special Correspondence to the MARINE REVIEW.

TOLEDO O., April 30th.—Messrs. Hadley, Burdick and Hubbard, of this city, have added another fine steamer to their fleet of vessels, by the purchase of the new steamer Panther. Captain James Davidson, of West Bay City, the builder of the Panther, was here last week and closed the deal. The steamer Monohansett was exchanged as part payment for the Panther which is valued in Lloyd's at \$120,000. The balance, cash payment, is private. The Panther was launched last fall and has only made a few trips. Her dimensions are: Length 286 feet; beam 39 feet; depth of hold 21 feet. She has a carrying capacity of 2000 tons. She will be commanded by Captain T. D. Gibson, and William Decker, of this city, is to be chief engineer. The vessel is now at Tonawanda. She is to be fitted out immediately and tow the schooner Massasoit.

Extensive improvements have been made this spring at the Columbus & Hocking and the Ohio Central coal wharves. About \$20,000 was spent on the former, replacing tracks, building two new derricks and dredging a clear channel all about the wharf. At the Ohio Central 750 feet of extension to the lumber wharf has been completed. A new derrick has been placed on the coal wharf and 15 new Ludlow coal buckets have been ordered for use here. It is claimed that with these new buckets nearly half the time can be saved.

At the Wheeling & Lake Erie coal wharf, at Ironville, work has been commenced on a 200-foot extension. Work is to be commenced on the straight channel this week.

The steamer Flora of the Grummond Line has commenced her regular trips to Mackinac, but other passenger business will not open until June 1. About \$10,000 was spent on the Flora during the winter.

Sales at Racine.

Special Correspondence to the MARINE REVIEW.

RACINE, Wis., April 30.—Capt. H. Williamson has purchased from Chicago parties the schooner Major N. H. Ferry for \$4,000 and has spent some money in improving her. Another transfer is that of the half interest of Mrs. Harrison Fellows in the schooner J. B. Newland to Capt. Chris. Nalied and Erick Erickson for \$2,000. Capt. Nalied succeeds Capt. Alec. Anderson in command of the boat.

Capt. Abram Anderson, an old and experienced lake master, died last week at Frankfort, Mich., after an illness of only a few days. He had but recently left here to put his schooner Jennie Weaver in shape for the season's work.

Knapp & Gillen, who are having a new tug built at Buffalo, to be ready about June 1, have rented the tug William Ewing, of Chicago, for temporary service. Capt. Higgin, who is now commanding the Ewing, will take the new tug when she comes out. He is a young man, careful and accommodating.

The flags of the signal service will hereafter be displayed from the station of the life saving crew.

Lake Michigan Matters.

Special Correspondence to the MARINE REVIEW.

GRAND HAVEN, Mich., April 30.—The propellers Ionia and Mary H. Boyce and schooners Mary A. McGregor and William Loutit are the only boats of this port not yet provided for in contracts for the season. The Boyce will come out as a double-decker, painted black from stem to stern. The M. C. Ford has also been double-decked and will take for her first load grain from Chicago to Kingston.

Capt. Ira Williams has been appointed master of the excursion steamer Lizzie A. Walsh and G. B. Parker goes to Chicago to take the position of clerk on the City of Duluth.

Capt. Kirby has sold the tug McCormick and two lighters to Racine parties.

At Robertson's yard a steam yacht for Capt. Cobb, of Spring Lake, is receiving the finishing touches but there is no new work outside of this on hand and none is expected. The outlook is not encouraging.

Another Obstruction Out of the Way.

Special Correspondence to the MARINE REVIEW.

AMHERSTBURG, Ont., April 30.—After removing the wreck of the schooner Charger, sunk in Pelee passage, Lake Erie, Capt. F. B. Hacket placed a red flag over the spot. The wreck was completely removed by dynamite. Capt. Hacket says he is positive that there is no part of the vessel left, so that masters of deep laden vessels need have no fear of the place in future. The flag marking the spot is, of course, only placed there temporarily. The officers of the marine department at Ottawa are deserving of praise for their prompt action in having this obstruction removed before navigation is fairly open.

Diver Thomas Grady did the work below, placing the dynamite in the center of the hold. The explosion was terrific, raising an immense volume of water in the air and blowing the schooner to atoms. Several of the larger pieces were picked up by Capt. Hackett and were given to Collector of Customs Gott at this port.

Government Engineer Noble was here last week inspecting the two new light towers which were recently erected below the Lime-Kilns' crossing as a range for boats passing down over the crossing. He was also making arrangements for the care of the Government's lights, the contract for which has not been awarded yet.

The steamer City of Windsor left for the upper lakes on Monday. Capt. Moore is master and A. J. Paisley, clerk. The steamer will make round trips every four days to Goderich, Kincardine, and lake points as far north as Manitoulin island.

Canadian Sault and Dougall Rock.

The following letters from Canadian government officials are self-explanatory:

Department of Railways and Canals, Ottawa, April 24, 1891.

MARINE REVIEW—Gentlemen: In answer to your letter of the 21st inst., asking whether the new canal at Sault Ste. Marie is to be 100 feet wide and 20 feet deep, I am to say, that the order has not yet been issued. I have the honor to be, gentlemen, your obedient servant.

A. P. BRADLEY, Secretary.

Marine Department, Ottawa, April 20, 1891.

Capt. George P. McKay, Cleveland Vessel Owners' Association—Sir: I have to acknowledge the receipt of your letter of the 16th inst., calling attention to the dangerous obstruction in Detroit river, known as the Dougall rock, and requesting that it might be removed, and I am to inform you that your letter has been referred to the department of public works, as the matter of removal of such obstructions appertains to that department. I am sir, your most obedient servant,

WM. SMITH, Deputy Minister of Marine

Transfers of Vessel Property.

Following are some recent transfers of vessel property: Tug Paige, Ashland Tug and Steamboat Company, Ashland, to Capt. Hugh E. Maloney, \$5,000; schooner Jennie Mullen, Mrs. Jennie Mullen, of Chicago, to Helen Sanders, same, \$3,000; tug George Hand, J. J. Lynn, Port Huron, to Bay City Dredge Company; schooner Ida, Charles Meers, of Chicago, to George Gardner, same, \$3,100; schooner Emma L. Coyne, Henry Lester, Marine City, to Capt. Edward Donnelly, East Saginaw, one-third interest.

The Vanderbilts have gone away from home for another yacht. F. W. Vanderbilt recently purchased the English yacht Conquerer and will bring her over here early in June. The Alva was built in this country, but might just as well have been constructed in a foreign shipyard, as an English naval architect, St. Clare Byrne, of Liverpool, designed her.

The MARINE REVIEW and the MARINE ENGINEER, London, one year for \$4. Write the MARINE REVIEW.

Iron Mining.

VALUE OF LEADING STOCKS.

Quoted by Chas. H. Potter & Co., No. 104 Superior St.

Stocks.	Par Value.	Bid.	Asked.
Cleveland Iron Mining Company.....	\$ 25 00	\$ 15 00	\$ 16 00
Champion Iron Company.....	25 00	90 00	100 00
Chandler Iron Company.....	25 00	39 00	40 00
Chicago and Minnesota Ore Company.....	100 00	110 00
Iron Cliffs Iron Company.....	50 00	120 00
Jackson Iron Company.....	25 00	90 00	100 00
Lake Superior Iron Company.....	25 00	65 00	68 00
Minnesota Iron Company.....	100 00	68 00	70 00
Pittsburg Lake Angeline Iron Co.....	25 00	145 00	150 00
Republic Iron Company.....	25 00	26 50	28 50
Michigamme.....	25 00	8 50	10 00

The Jackson and Lake Superior companies both have stock piles about equal to those of a year ago. The Jackson has about 50,000 tons, notwithstanding the closing down of the South Jackson and the accident that befell No. 7 pit some time ago. Mr. Joseph S. Fay, Jr., treasurer of the Lake Superior company, was in Ishpeming during last week and expressed himself to a representative of Iron Ore as being well pleased with the appearance of the mine. He thinks the new finds are fully taking the place of the old, and looks upon those made at Sec. 16 as being indicative of much good, although enough has not yet been done to determine the extent of the deposit. The same could also be said of the ore found beneath Lake Angeline. Referring to the latter deposit he remarked that there was little encouragement for the pumping out of the water of the lake in a dull season like the present. The amount of ore at this point was as yet an unknown quantity. It has not been determined whether or not the company possessed any ore to the south of the run they were now working on, and it would require some time to settle this point. It might be that the ore occupied such a position that they could mine the whole of it without having to do anything in the way of removing the water from the lake.

Although there is little profit for Menominee range mines to be expected in the coming season's business, work goes on at nearly all of them. The Mastodon, Mansfield, Shafer and Hemlock are said to have sold small lots of ore and are preparing for shipments. At the Chapin, the working force is slowly being decreased and the daily output has dropped to about 1,200 tons. There is now in stock about 100,000 tons. About 300 tons per day is being shipped by all rail. "D" shaft is nearly down to the seventh level. Fully 1,400 feet more of the water level remains to be driven. The Ludington mine is hoisting 500 tons a day and has begun shipments to Gladstone, while the Pewabic has increased its force to 300 men and has 25,000 tons in stock. The Monitor company's property has been taken by the sheriff and operations suspended. It is said that there are \$60,000 in claims against the company, of which \$20,000 is in labor liens. The shaft at the new find of the Commonwealth company is down 80 feet and they are drifting in first class ore. Several test pits are being sunk west of the shaft to ascertain the width of the vein, and a survey is being made by the Chicago & Northwestern for a spur track.

A new mining law is proposed for Ontario, which, if passed, will prevent investment of American capital in Canadian mineral lands. It fixes the price of all crown lands to be sold as mining lands or locations in the districts of Algoma, Thunder Bay, Rainy river and that part of the district of Nipissing which lies north of the French river, Nipissing lake and the river Mattawa shall be \$5 per acre. All other crown lands sold as mining lands or locations shall be \$3 per acre, and all ores and minerals mined, wrought or obtained from lands located, sold and granted or leased by the crown shall be subject, according to the act, to a royalty to the crown for the use of the province, whether such royalty be reserved in the grant, patent or lease, or not. The following specially named ores shall be subject to the royalty following: Silver, nickle and copper, 3 per cent., iron, 2 per cent. All other ores shall be subject to such royalty as shall be from time to time imposed by order-in-council, not exceeding 3 per cent.

The new find at Lake Angeline mentioned last week is developing steadily. They have cut into the lens for a distance of

22 feet, and the breast of the drift is still in ore. They are crossing the deposit at a right angle to its strike, and the indications are promising for a very important addition to the mineral stores of the company. The ore is of Bessemer grade, giving 66 per cent. in metallic iron and .030 per cent. in phosphorus.—Iron Ore.

At the Hamilton mine, Iron Mountain, a new lens of fine blue ore was struck last week after a drift had been carried 400 feet from the 1,300-foot level in the direction of a new shaft. At last accounts the ore had been penetrated a distance of 30 feet and there was every indication that the deposit would prove a large one. The lens occupying the upper levels contains about 1,500,000 tons of ore.

The night shift at the Brotherton has been discontinued. The property is in the Sunday lake district of the Gogebic range, and produces fine Bessemer ore. At the annual meeting held in Milwaukee a few days since it was decided to reduce the output for this season. There is said to be 40,000 tons remaining unsold from last year's output, which was the cause of the discontinuance of one shift.

The Minnesota legislature adjourned without passing the act which provided for a specific tax of 3 cents a ton on ore.

Samuel Plimsoll, "the Sailors' Friend."

An odd story is told of how Samuel Plimsoll, who is known in England as "the sailors' friend," and who is now in this country prosecuting an inquiry into the business of transporting live cattle across the ocean, came to battle for the lives of seamen. Both Mr. and Mrs. Plimsoll were found of the sea, and on one occasion they went from London to Hull on the Yorkshire coast, a voyage which skirts the most dangerous portions of the British shores. The steamer upon which they took passage seems to have been greatly overloaded, and a very severe storm was encountered, the vessel, crew and passengers being in great peril. In gratitude for their escape Mr. Plimsoll resolved to undertake the agitation which resulted in one of the greatest reforms of modern times, and which he still continues. He had amassed a large fortune as a coal merchant and he has used his means liberally and devoted much time to his efforts for the protection of the men who go down to the sea in ships. He sought a seat in parliament in order to further his reform, and was elected in 1868 and re-elected in 1872.

Cleveland Matters.

Capt. C. & Benham, who has been at the head of matters pertaining to fire protection in West Cleveland for three years past, was banqueted and presented with a neat watch charm, characteristic of the service, on retiring recently.

Capt. R. D. Buckman expects to take the first of the McDougall steamboats to the Atlantic. He has been studying navigation in the east during the past winter with Capt. Simpson, of Simpson & Morrison, compass adjusters, and passed an examination as master of ocean ships a week ago. Capt. Buckman has had experience as mate of several lake vessels.

Capt. R. J. Drake, brother of Capt. J. M. Drake, of the Drake Coal Company, died recently at his home in Seneca county, Ohio, near Fostoria, in his sixty-ninth year. He was well known in connection with the lake marine, having founded some years ago the Cleveland-Port Stanley line in which the Lady Franklin and City of Sandusky were engaged, and having been in command of both of these vessels.

Capt. Amasa Fitch, of Chicago, who went to Ogdensburg to look after the fire loss on C. W. Elphicke & Co.'s steamer Josephine, has a poor opinion of the fire service of the town. The firemen are paid \$1 an hour for the first hour's service and 50 cents an hour for subsequent time. This would seem like offering a premium on fires. Capt. Fitch commends, however, the work of the department on the boat in which he was interested.

MARINE REVIEW.

DEVOTED TO THE LAKE MARINE AND KINDRED INTERESTS.

JOHN M. MULROONEY, } PROPRIETORS.
F. M. BARTON, }

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The books of the United States treasury department contain the names of 3,510 vessels, measuring 1,063,063.90 tons in the lake trade. In classification of this fleet the lakes have more steamboats of 1,000 to 2,500 tons than the combined ownership of this class of vessels in all other sections of the country. The classification is as follows:

Class.	Number.	Tonnage.
Steam vessels	1,527	652,922.25
Sailing vessels.....	1,272	328,655.96
Canal boats.....	657	67,574.90
Barges.....	54	13,910.09

Total..... 3,510 1,063,063.90

According to the report of William W. Bates, United States commissioner of navigation, 46 per cent. of the new tonnage of the country was built on the lakes during 1889. This is a percentage greater than the work of the Atlantic coast and western rivers combined, and almost equal to the whole work on the Atlantic and Pacific coast. In 1890 the tonnage built on the lakes is but very little less than that built on the Atlantic and Gulf coasts. Tonnage built on the lakes during the past five years was as follows:

	No. of boats.	Net Tonnage.
1886.....	85	20,400.54
1887.....	152	56,488.32
1888.....	222	101,102.87
1889.....	225	107,080.30
1890.....	218	108,515.00

Total..... 902 393,597.03

St. Mary's Falls and Suez canal traffic: Number of boats through St. Mary's Falls canal in 1890, 234 days of navigation, 10,557; tonnage, net registered, 8,454,435. Number of boats through Suez canal during 1890, full year, 3,389; tonnage, net registered, 6,890,014.

Annual tonnage entries and clearances of the great seaports of the world, for 1889: New York, 11,051,236 tons; all seaports in the United States, 26,983,315 tons; Liverpool, 14,175,200 tons; London, 19,245,417 tons.

Tonnage passing through Detroit river during 234 days of navigation in 1889, amounted to 36,203,606 tons. Ten million tons more than the entries and clearances of all the seaports in the United States, and three million tons more than the combined foreign and coastwise shipping of Liverpool and London.

Entered at Cleveland Post Office as Second-class Mail Matter.

THE latest report from Canadian government officials at Ottawa, says that Sir John Macdonald recently promised a deputation of marine men that an appropriation will be secured at the coming session of parliament to commence work on a canal connecting Georgian bay with Lake Ontario. If this is true, it is one of the most important announcements made in connection with the lakes for some time past. There is no wild imagination about the plans for this canal and there is no doubt that it will eventually be built and will be of almost as much importance as the Sault canal. The construction of a canal or ship-railway across the strip of land between Georgian bay and Lake Ontario is in line with the Canadian policy favoring an enlarged waterway between the Great Lakes and the Atlantic seaboard. E. L. Corthell, an eminent civil engineer of Chicago, recently prepared a very valuable report on this subject, which was first read before the Canadian Society of Engineers a few weeks ago. The scheme for such a waterway is entirely practicable and the first steps toward it will be in the completion of the work now under way in the canals of the St. Lawrence river and the construction of the canal for which an appropriation is now promised.

THE story sent out from Chicago about a secret meeting in Detroit of Michigan Central officials who have formed a company for the construction of a tunnel under the Detroit river at Detroit sounds suspicious. The Michigan Central wants no tunnel. That company is still in favor of a high bridge, and stories of the kind sent out from Chicago may be expected as long as there is any talk of outside capital going into a tunnel. That part of the Chicago rumor which says that work will begin immediately is absurd, as the right to construct a tunnel under the river has not yet been secured by anyone.

Six Ships for the Coast.

Lake shipbuilders are now engaged on six steel steam vessels that will go down the Welland and St. Lawrence canals to the Atlantic before the close of navigation, and this number may be doubled if a profit is found in the Pacific coast trade for two of these vessels, barges of the whale-shaped type built by the American Steel Barge Company, of West Superior, Wis. The four boats in addition to the two barges are two government light-house tenders, referred to elsewhere, for which the Globe Iron Works Company, of Cleveland, received a contract a few days ago, a small twin-screw steamer to be built by F. W. Wheeler & Co., of West Bay City, Mich., for the Nicaragua Canal Company, and the steamship Keweenaw, also building by Wheeler & Co.

In the case of only one of these boats, the Keweenaw, will it be necessary to resort to unusual measures in getting them to salt water. The others are Welland canai size and are shallow enough to run the rapids of the St. Lawrence river. The builders of the Keweenaw propose to launch her, probably next Saturday, in two sections. The launch will undoubtedly attract a great deal of attention. The cost of getting the Mackinaw, a sistership of the Keweenaw, to the Atlantic last fall, was nearly \$10,000, one-half of which amount the builders expect to save by the new plan. The cutting in two of the Mackinaw was the first of the sort ever attempted by an American shipbuilder. The Mackinaw was run under her own steam from West Bay City to Buffalo, where she was placed in the Union dry dock, a row of rivets cut out around her amidships, following along the seams and butts, with the necessary irregularity consequent upon a proper breaking of butts as called for by the classification rules. A strong amidships bulkhead forward of the fire-room rendered the after section tight, and while the vessel was building a temporary steel partial bulkhead had been fitted in the after part of the forward section, clear of all broken butts. To make the forward body tight it was caulked and stiffened with shores about this temporary bulkhead. This work completed, the two portions of the boat were towed down Lake Erie, through the Welland canal, down Lake Ontario and the St. Lawrence river to Montreal, where a small dry dock was found, in which, by building an additional cofferdam around the boat, the portions could be assembled together. Here the work was done, and the vessel to all appearances having been constructed as a whole proceeded to New York. She was very successful in the coasting trade and is now on her way to Yucatan for a load of hemp.

The Keweenaw will be cut apart as she stands on the stocks, the work being done in the same manner as was done to the Mackinaw at Buffalo, the forward end pulled ahead a few feet, and then each portion launched separately. The two parts will be towed from West Bay City to Montreal, where the work of putting them together will be done the same as before.

Lake Builders Outbid Coast Builders.

The award of the contract by the light-house board to the Globe Iron Works Company, Cleveland, for the building of two Atlantic light-house tenders, occasioned surprise at Washington and created a feeling of uneasiness among eastern ship builders. Lake builder's bids were as follows: Globe Iron Works Company, \$155,700; Cleveland Ship Building Company, \$183,000; Union Dry Dock Company, \$197,000; Craig Ship Building Company, one steamer, \$85,844; F. W. Wheeler & Co., \$174,000; E. J. Howard, Jeffersonville, Ind., one steamer, \$97,000. The lowest bid from coast builders was higher than the highest bid from the lakes. Eastern builders may say the contract is of small moment, but the demonstration of the fact that our inland builders can do as good work for less money will not escape the attention of private builders in the east. In reply to the question as to why lake ship builders have not played an important part in this coast business hitherto, the answer is that their yards have been crowded by a class of work that brought greater returns on the investment than did the work of eastern yards.

The Private Light Question.

None of the private lights in the vicinity of the Lime-Kilns have been placed in operation as yet but it would seem from the number of vessels that have already met with big losses on account of the absence of the lights that all owners should soon agree to pay their portion of the expense of maintaining them. All but two or three of the Cleveland owners have signified their willingness to pay 1 ½ cents a ton towards the lights and the Buffalo line managers will do likewise, but the steam tonnage contributing from these two cities will not amount to more than about \$4,000, while the expense will aggregate about \$6,000. It is expected that Detroit and other places will make up the difference but Capt. McKay, of the Cleveland Vessel Owners' Association, who has always looked after the lighting of the river says he will not take it upon himself to order the lights in operation until he is assured of money enough to pay for them.

The losses already sustained, outside of the heavy damage to the City of Detroit, would about equal the expense of the lights. On Thursday night the Northerner, with tow, bound up, was aground for three hours at Bar point and in passing over the Lime-kilns at 6 o'clock she crowded the Buffalo propeller Milwaukee onto one side of the cut. The Milwaukee was injured so that she had to put into Amherstburg, where she was drawing 24 inches of water an hour before a hole in her bottom was patched up. She is now in dock in Buffalo. The latest victim on account of the absence of the float lights at the cut is the propeller Arabia. She succeeded in getting up to Detroit after striking but had to be run onto the middle ground opposite the Michigan Central elevator, where a steam pump was placed aboard her.

Excelsior Marine Benevolent Association.

The different lodges have settled affairs for the year and have held their last meetings. The Cleveland lodge concluded with 168 members and is now the banner lodge in membership. Frank Rice was the last member admitted. William Gnewuch, of the tug Welcome, and James Bruce, John M. Crawford and Geo. B. Kendall are now members of the Milwaukee branch. This branch will hold meetings for two weeks to come.

In General.

Coal from Oswego to Milwaukee pays \$1.05 a ton. A few charters have been made recently at that figure.

Cleveland lumber handlers are being fought vigorously by lumber dealers who have united in an effort to break up the strength of the union.

Capt. Edward Dubay, master of the barge Felton, fell from a ladder while climbing onto his vessel at Tonawanda, Tuesday afternoon, and was killed. He was a son of Capt. Dubay, of Bay City.

For Economy in Fuel and Additional Capacity.

Charles W. Whitney, 81 and 83 Fulton street, New York, representing Messrs. John Williams & Co., of Liverpool, has taken an order from the Plant Steamship Line for 520 Serve's ribbed boiler tubes and stays and for six Purve's ribbed boiler furnaces for the steamship Mascotte, which is being repaired and put in order at Jacksonville, Fla.

Opening of the Sault, Straits and Rivers.

April 27 is the date that marks the opening of the Sault canal and river navigation. The tug J. W. Bennett, from Detroit to Duluth was the first boat to pass. The Emily P. Weed and the Livingstone worked their way through the following morning.

April 20 the schooner Badger went through the north passage of the Straits.

April 24 was the date of the first arrival at Buffalo from Chicago, the western liner Harlem. The Tioga, Syracuse and Chicago followed close behind.

April 23 is the date on which the St. Clair flats canal was clearly open for the passage of big boats, the Susquehanna being the first to force a passage. She was followed by the Atlantic, Hudson, Jewett, Cayuga, Albany and Scranton. Boats loaded deeper than 15 feet bring up about 100 feet below the canal. The Brazil had to be relieved of 3,000 bushels of grain. The Elphicke, John B. Lyon, Parnell, John Owen, Northern Light and others were aground.

Work of the Ship Yards.

Four vessels aggregating about 5600 net registered tons, were launched during the past week. They were the passenger steamer Atlanta, built by the Detroit Dry Dock Company for the Goodrich Transportation Company, the propeller Iosco, built by Wheeler & Co., of West Bay City, for Penoyer Bros. of An Sable, and two whale-back barges at McDougall's West Superior yard. Within the coming week nine or ten vessels of about 14,500 tons will be launched at the different yards. Saturday the Globe company at Cleveland will launch the twin screw steamer Virginia, the Detroit Dry Dock Company will launch the E. C. Pope and Wheeler & Co. will launch the Keweenaw, a vessel to go to the coast. Later on Capt. James Davidson, of West Bay City, will launch his "Big Four" and one other vessel. The launch of the Virginia at the Globe yard will be attended by unusual ceremony, as she is one of the finest boats ever built on the lakes.

At 4 p. m. on Saturday next, the big steel steamship E. C. Pope, duplicate of the Maryland, the largest carrier on the lakes, will be launched from the Wyandotte yard, of the Detroit Dry Dock Company. The launch will undoubtedly be largely attended. The boat is owned by the Dry Dock Navigation Company, of Detroit, of which Capt. James Millen is general manger.

The War on Hull Risks.

Insurance rates on hulls have been cut from 10 to 30 per cent. at all ports on the lakes, as shown by correspondence elsewhere, and now it is announced that there is no hope of a meeting of general agents to stop the fierce competition, although local agents in several places kept their offices open late Wednesday night securing all the risks they could lay hands on at the reduced rates.

Boiler Tube Plates.

In referring to a recent discussion regarding boilers at a meeting of engineers in London, a leading Cleveland engineer whose attention is directed to steam vessels said:

"It would seem that the British locomotive boiler designers and makers are unable to use steel satisfactorily for the tube plates of their boilers and that they yet make such parts of copper, although steel is generally used for such purposes in this country and that with perfectly satisfactory results. This would indicate that our boilers are of superior design and workmanship, or else the circulation is more perfect, and this circulation is the panacea for over-heating, leakage due to expansion and contraction, and nearly all the other evils to which the boiler tribe is heir. There is no doubt that mild steel is the proper material with which to construct boilers throughout. Our combustion chambers are larger than those obtaining on the other side of the Atlantic and that may partly account for the uniform success we have had with steel tube plates in this type of boiler both ashore and in our small craft afloat. Moreover, it is more than likely that our steel tube plates are much thinner than is common in foreign torpedo boat boilers, and that may be another reason why American engineers have been more successful with steel in connection with forced draft."

The Alva, Vanderbilt's big ocean cruiser, has sixty-two officers and men on her roll, and to fit them out in suits costs nearly \$3,000. The Alva's men, from captain to cabin boy, were recently measured for two to four suits of clothes apiece, running in price to \$55 per suit. Everything aboard her is kept in man-of-war trim.

Around the Lakes.

The Welland canal hereafter will be closed on Sunday. Who cares this season?

Henry Whitbeck, well-known and wealthy lumberman, of Chicago, died last week.

Lumber rates from Menominee, Manistee and Manistique to Chicago are established at \$1.50.

The rebuilt tug Justice Field, once the Bismarck, will hereafter be known as the Traveler.

The sails of twenty-five vessels were damaged or destroyed by fire in Channon & Co.'s sail loft in Chicago last week.

No dredging has been done at Buffalo and several boats have been aground. There are a number of places where there is only 14½ feet of water.

Last year's flour shipments from West Superior and Duluth were 2,500,000 barrels, and this year they will not be less than 3,000,000 and possibly as high as 3,300,000.

Capt. Joseph Braman has been re-elected harbor master at Milwaukee. Capt. John Skeldon is the new official in the same capacity at Toledo and Richard Powers at Chicago.

The managers of the Milwaukee Steamship Company are considering the advisability of fitting the steamer Frank L. Vance out with pole spars. Pole spars will be found on most of the big boats before long.

The propeller Buell, of the Western line, will tow the schooners Elvina and F. B. Gardner. The Canisteo takes the Fulton and A. Stewart, the Weston the Jeannette and Eleanor, and the Allegheny the Transfer and W. B. Ogden.

Early reports from Gladstone regarding depth of water are not favorable to the new Lake Michigan port. One of the F. & P. M. R. R. steamers encountered a heavy bill of expense, on account of grounding while entering with a cargo of salt.

Sault canal authorities give notice that 14 feet 2 inches is the depth of water over the new oak platform placed in position during the past winter as a protection against the lower miter sills. All crafts drawing more will not be floated and must lighter.

The work on the P., V. & A. R. R. docks at Ashtabula, above the swing bridge, is nearing completion. It embraces new docks the entire length on both sides of the slip, and several hundred feet on the river front. The dock below the bridge is being extended about 50 feet.

The opening rate on lumber from the head of Lake Superior to Chicago is \$2.25. Shipments from Chequamegon bay points will be heavy during this season. The Lake Michigan and Lake Superior Transportation Company carries a large portion of the product of this district.

Capt. Duncan McLachlan has withdrawn from the Detroit & Cleveland Steam Navigation Company, and will take charge of the steamer Greyhound. He had been relieved of the command of the City of Detroit, because of her striking on Dougall rock, and given an inferior steamer.

C. W. Elphicke & Co. have taken again this year the contract to carry iron ore from Escanaba to South Chicago. The schooners that will be employed in the trade are the Narragansett, D. S. Austin, Welsey and Tom Holland. The rate is not given out, but is lower than last year.

Dredges will be put to work on the bar at the entrance to Ashtabula harbor within a few days. There is but 15 feet of water where there should be 17 feet. Maj. Overman, the government engineer, would have had the obstruction removed earlier but it was generally believed that boats would not begin to move before May 15.

For some reason, the underwriters have not yet settled the loss of the old propeller Nevada, which foundered on Lake Michigan last fall. She was insured for \$50,000, and it is said the underwriters are asking delay on a sort of general principles. They do not refuse to pay, and merely ask the owners not to shoot.—Buffalo Express.

The Merchants' Line this year will have, on the Montreal and Chicago route, the propellers Alma Munro, Acadia and Cuba. The Alma Munro will leave Montreal May 2 for Port Arthur. On the Lake Superior service the propellers Canada and Celtic will be placed, the last named boat leaving Montreal on May 5 for Port Arthur and Duluth.

The Northwest Transportation Company, operated in connection with the St. Paul & Duluth Railway at Duluth and the Grand Trunk at Sarnia, is figuring on a big business in flour and bonded grain for export via Montreal. A slightly lower rate than last season has been decided upon. The transportation line will open the season with two boats, the Monarch and United Empire, and as soon as the passenger business warrants will put on the Campana and Ontario.

If there was any truth in the report from Port Huron that some of the dynamite cartridges had been lost during progress of the work of blowing up the sunken Tremble and Ben Hur, it would be a very serious affair, but the government officer in charge as well as the contractor, gives assurance that it was nothing more than a sensational story. Every cartridge placed by the divers must be accounted for. The work is going on slowly but lights will be kept over the wrecks.

Capt. William Dickson and Daniel MacFarlane have been dropped from the list of masters of the Lehigh Valley Line, and Capt. James Tod and J. T. Kenny have been added. The former is on the Tacoma and the latter on the Clyde. The Tacoma, H. E. Racker, R. A. Packer and Clyde go from Chicago to Buffalo, to await orders. The other two wooden steamers, the Fred. Mercer and Oceanica are in Buffalo. The steel steamers Tuscarora, Saranac, Seneca, Cayuga and Wilbur are in commission.

The B. & O. elevator at Fairport, Lake Erie, will give that company an increase in business for Philadelphia and Baltimore, as there will be a big saving in the water haul from Chicago and Toledo. The first cargo for the new elevator was delivered last week from Toledo by the schooner A. P. Grover. It was a cargo of corn, and the scarcity of that cereal accounts for the shipment by water from Toledo to Fairport. The schooner Moravia has a cargo of wheat from Chicago that will also go to the new elevator.

When government work now underway at South Chicago is completed—and it will be during the coming summer—a channel 200 feet wide and 17 feet deep in ordinary stages of water will extend three miles inland from the lake. The \$50,000 appropriated for dredging the Calumet river will be used in extending the deep water channel from One Hundred and Eighth to One Hundred and Thirteenth street. The Chicago breakwater will also be improved. The superstructure will be rebuilt and covered with six inch plank. The pier to the north of the harbor entrance will also be rebuilt and covered. The work will be done at a contract for \$90,000.

A correspondent of the Milwaukee Evening Wisconsin, writing from Pelee island, Lake Erie, makes an important suggestion with reference to an extension of the telephonic cable to the Dummy light, Point au Pelee. He proposes that the vessel and insurance men of the lake cities put in a proportionate quota and offer the Dominion government a sufficient sum to change this cable from where it now lands on Pelee island and bring it via the Dummy light to the east side of the island, thence to the life saving station, abreast of Chick-e-no-lee reef. It now lands in North bay, but goes to the west side and thence to the light. The point is, all the reefs, shoals, etc., lie on the east and south sides of Pelee island.

Worthington Independent Condenser.

The illustration on the first page of this issue represents a Worthington independent condenser, 2,000 i. h. p. The cut was made from a photograph of the condenser which was placed on the steamship Saranac, of the Lehigh Valley Line, last year, and operated so successfully. The Saranac made fifteen trips during the season, and upon examination of the water valves when the boat was laid up, they did not even show the markings of the valve seats.

Condensers of the same size are in operation on steamships Tuscarora, Emily P. Weed, Norman, Saxon, German, Briton, Grecian, Roman and the F. & P. M. steamship, No. 5, all of which are among the finest steel carriers on the lakes. Other size machines are in successful operation on the steamers Mary, Ossifrage, Buell, Canisteo, Massasauga, City of Fremont, Niagara and Duncan; the tug boats L. C. Schenck, Duncan City, Weller, Keystone, Oclemena and Companion, and on the yachts Hinda, Remora, Falcon, Roberta, Island Wanderer, Bell, Vita, Kingsford and others.

Ruling on the Marking of Names.

A circular under the date of April 16 from William W. Bates, commissioner of navigation, says: "Your attention is invited to the following ruling of the bureau upon the application of the act of Feb. 21, 1891, to the marking of the names of yachts and steam vessels. The marking of the name and port of yachts is specifically provided for by the act of March 3, 1883, amendatory of Sec. 4214, revised statutes, and the marking of the name of steam vessels is likewise specifically provided for by Sec. 4495, revised statutes. The statutes were not repealed except by implication. The supreme court has held that a specific provision for a particular class is not repealed by a general provision in a later act. Hence, it appears that the statutes relating to the marking of yachts and steam vessels must be construed together with the marking provided for by act of Feb. 21, 1891. This seems proper, also, for the reason that these several laws relate to the same subject, were enacted for the same purpose, are consistent and reconcilable, and seem to be better adapted to the particular class of vessel than the later law of February last, and it is, therefore, the ruling of the bureau that yachts must be marked in accordance with the act of March 3, 1883, and steamboats must be marked as provided for in Sec. 4495, revised statutes.

Notice to Mariners.

Information is again given by Light-house Inspector Heyerman that the Grosse Pointe light-ship has been placed in position. Vessels in passing should give her a berth of about 400 feet, where the best water will be found. The new Grosse Pointe beacon lights, now maintained by the government, are also in operation.

Plans are being arranged to place a fog horn on the schooner anchored at the end of the exterior breakwater at Chicago as a light-ship.

S. B. GRUMMOND,

Owner of the Largest Tug Line on the Great Lakes.

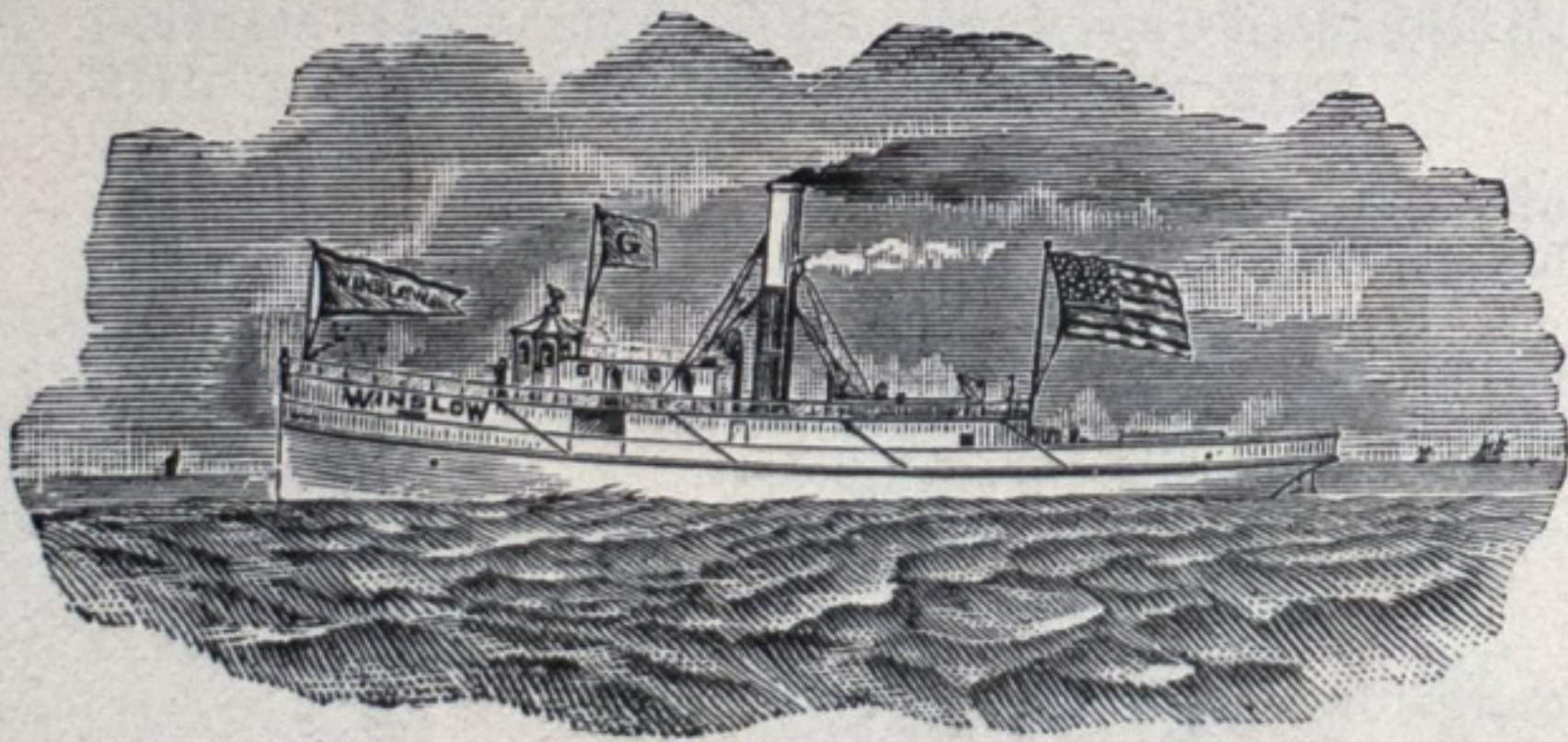
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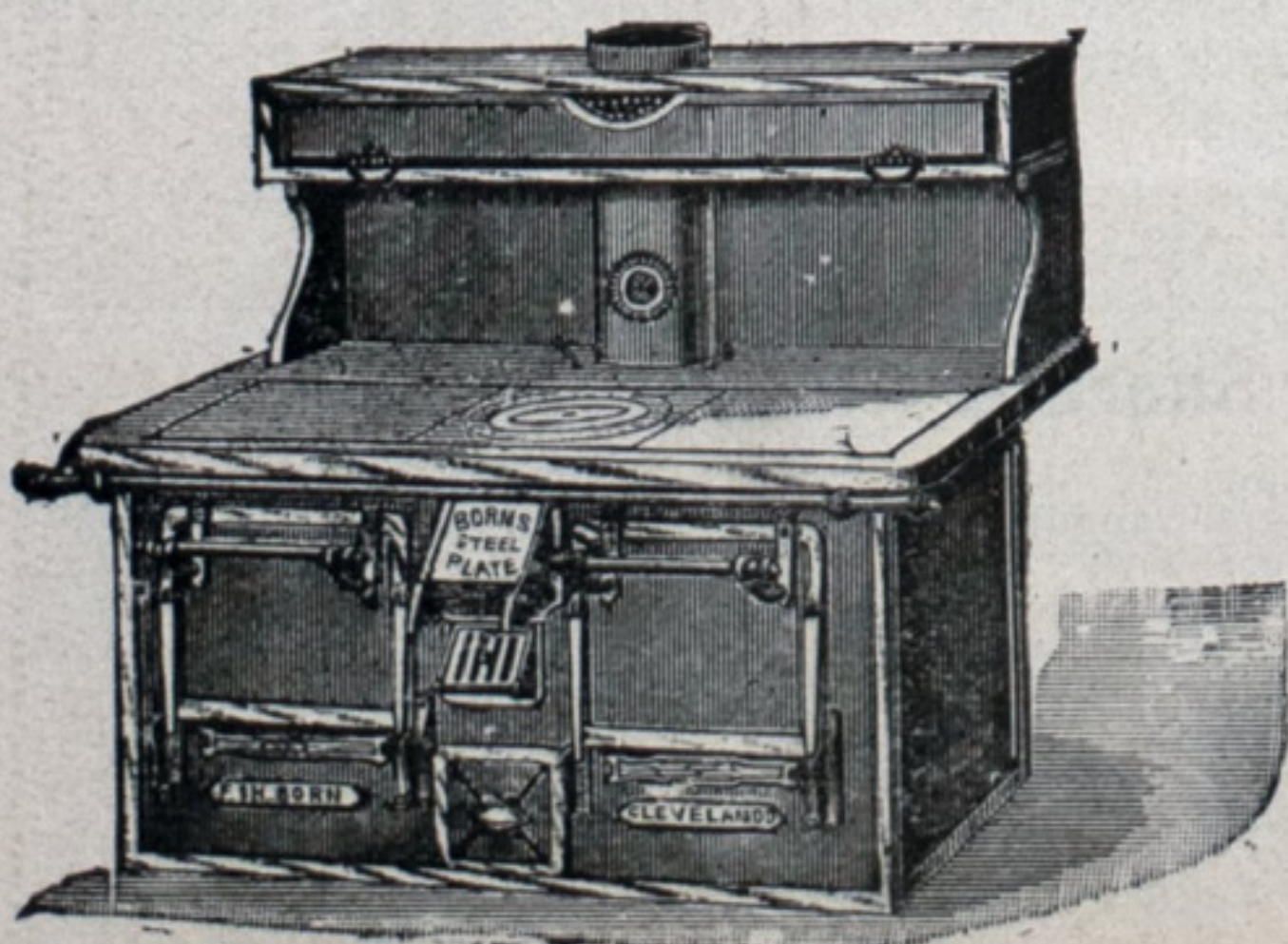


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Wrecking Tug: LEVIATHAN, Capt. J. Lafromboise,
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Every Range Warranted. Adapted for Hard or Soft Coal, Coke or Wood.

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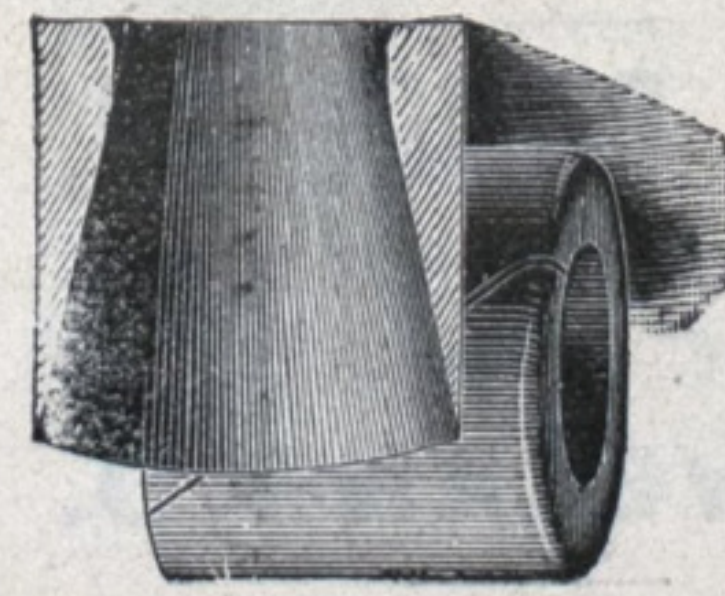
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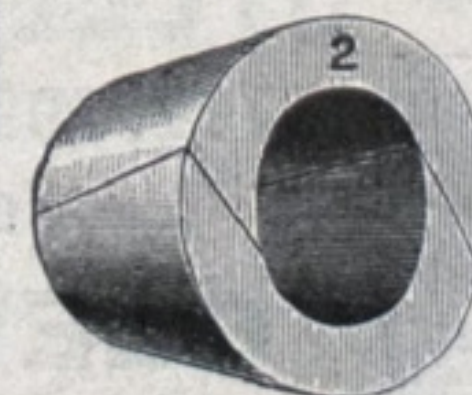
Can be applied without disconnecting
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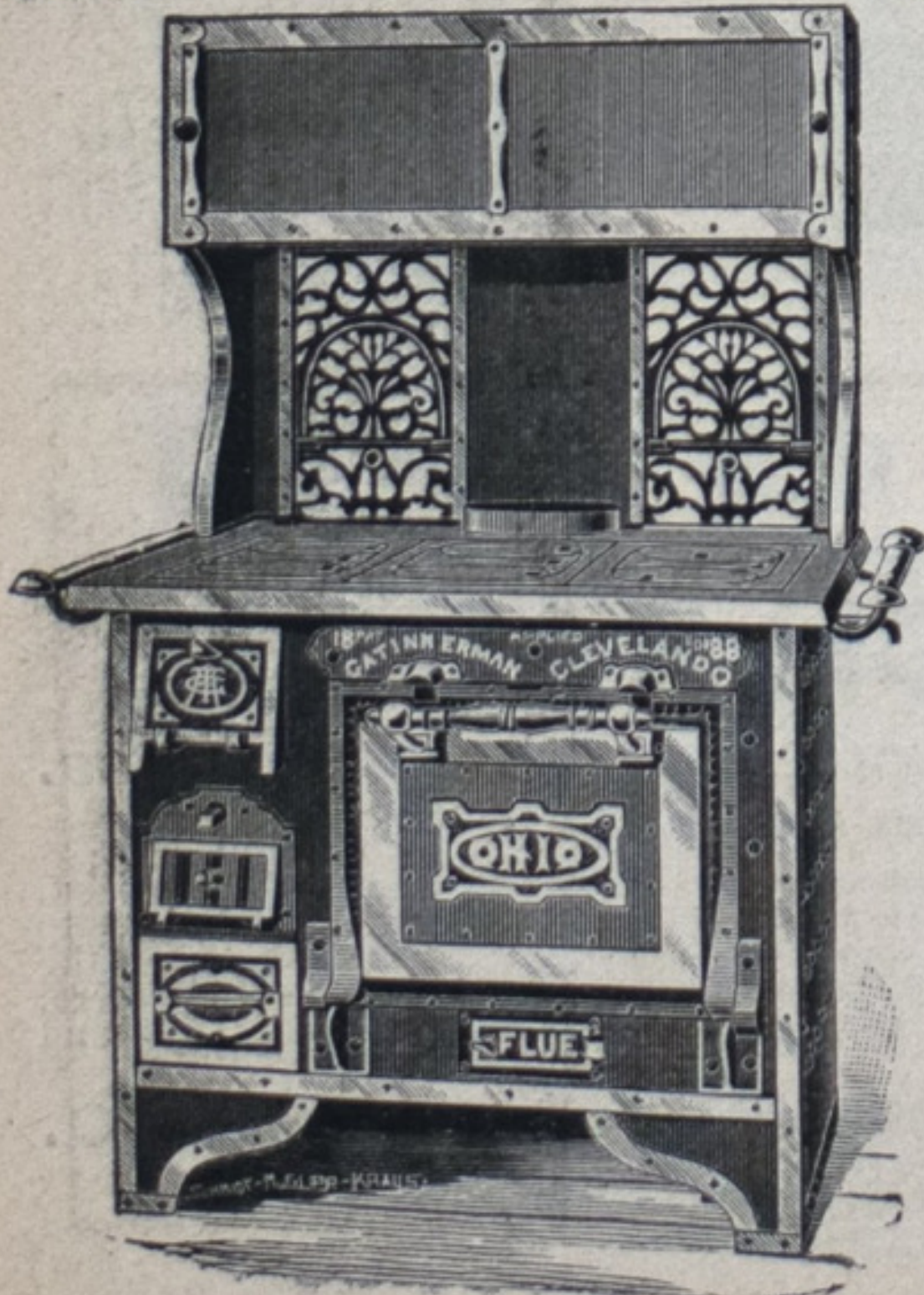
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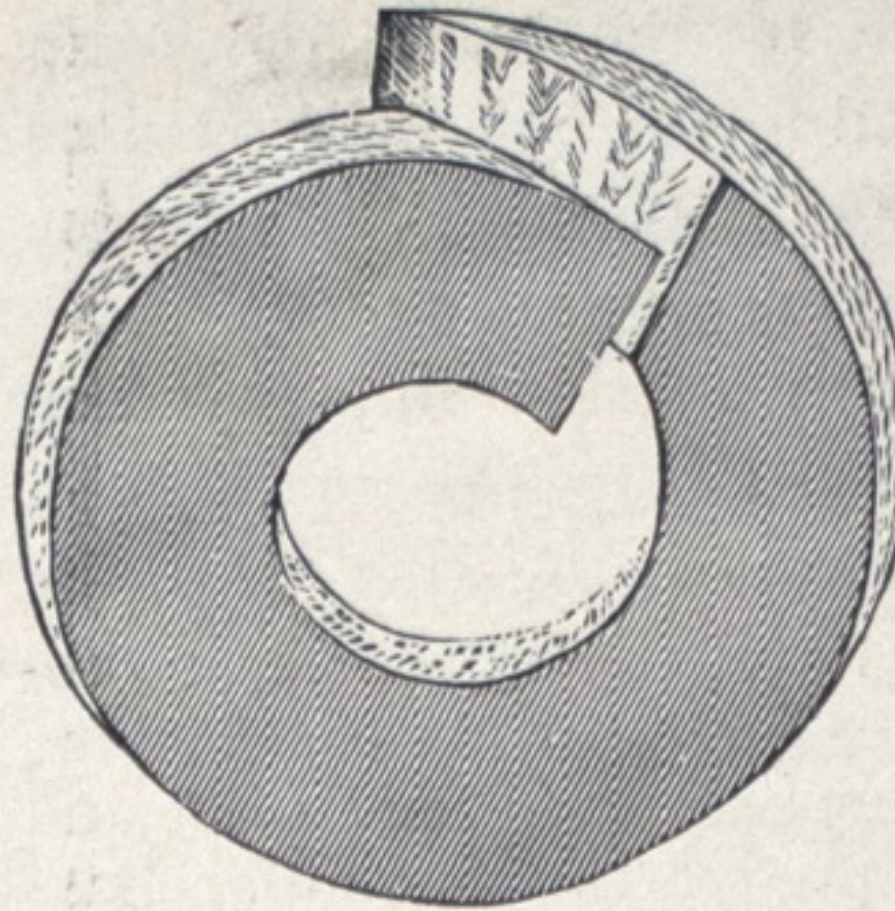
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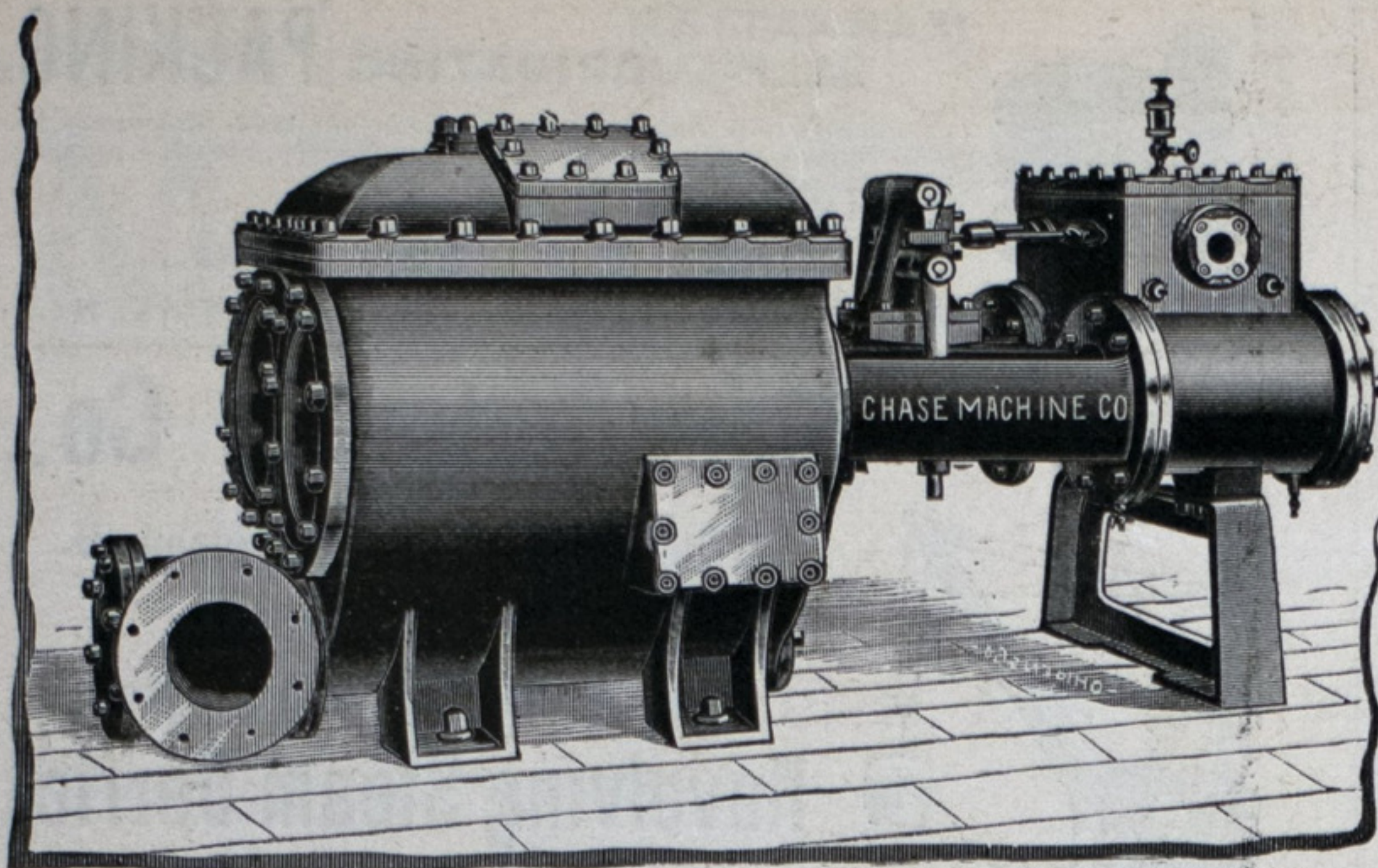
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Clark Dry Dock Co.	Detroit, Lower Docks,.....	{ 360 220	{ 68 42	10½ { 9 upper 11½ { 10 end.		Watchman at Dock will call Superintendent.
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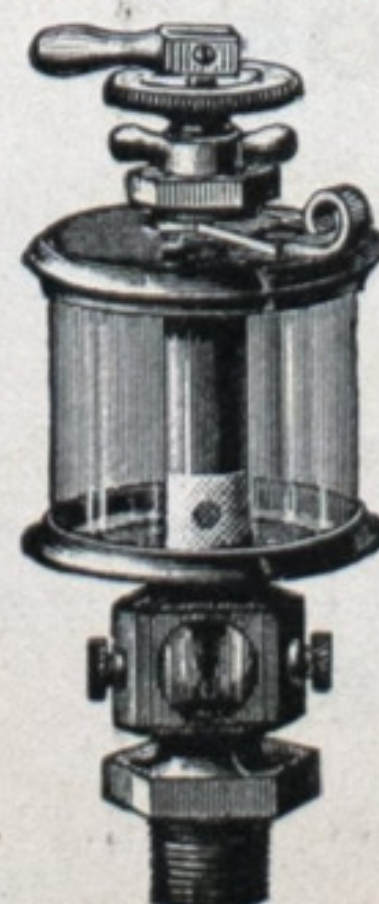
Use only Machines that are RELIABLE; that have PROVED themselves IN ACTUAL SERVICE. 100 Boats already use them.



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MILLER CHEMICAL ENGINE CO., Room 4, Bratenahl Blk.
GENTLEMEN: I had occasion on the 13th of November to use your Extinguisher on board the steamer Queen of the West, of Cleveland. A large lamp used for signal purposes aft, fell about twenty feet and set fire to the whole roof of the engine room. I do not know what the consequences would have been but for the prompt and effectual way in which your extinguisher put out the fire, as the wind was blowing hard and a heavy sea running at the time. I heartily recommend your machine as a fire extinguisher on all classes of steamships. Yours truly,
JOS. A. NICOLSEN, Master Str. Queen of the West.

182 24th Street,
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DEAR SIRS: Going up Lake Huron last fall during a heavy gale of wind and a big sea running, a fire broke out in one of the rooms of the steamer Fayette Brown, through the accidental upsetting of a lamp among some papers, and had gained considerable headway before discovered. By the prompt use of one of your Chemical Engines it was quickly subdued, and I think there was less than a pint of the fluid used. Have no doubt the fire would have given us lots of trouble without some such prompt and easy way of extinguishing it. Since that time I do not think a steamboat properly fitted out without the Miller Chemical Engine. Yours truly, C. H. BASSETT, Master Str. Fayette Brown.

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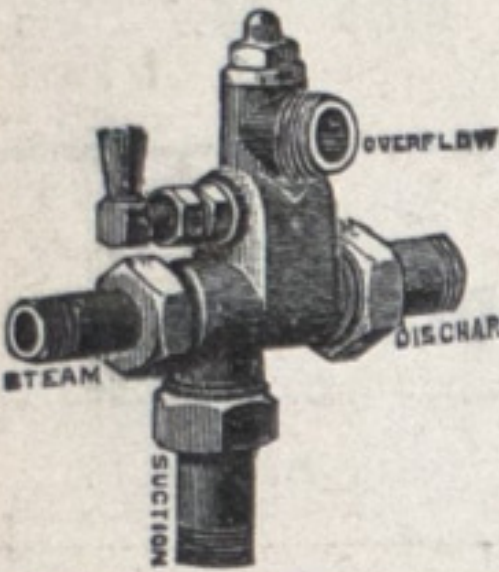
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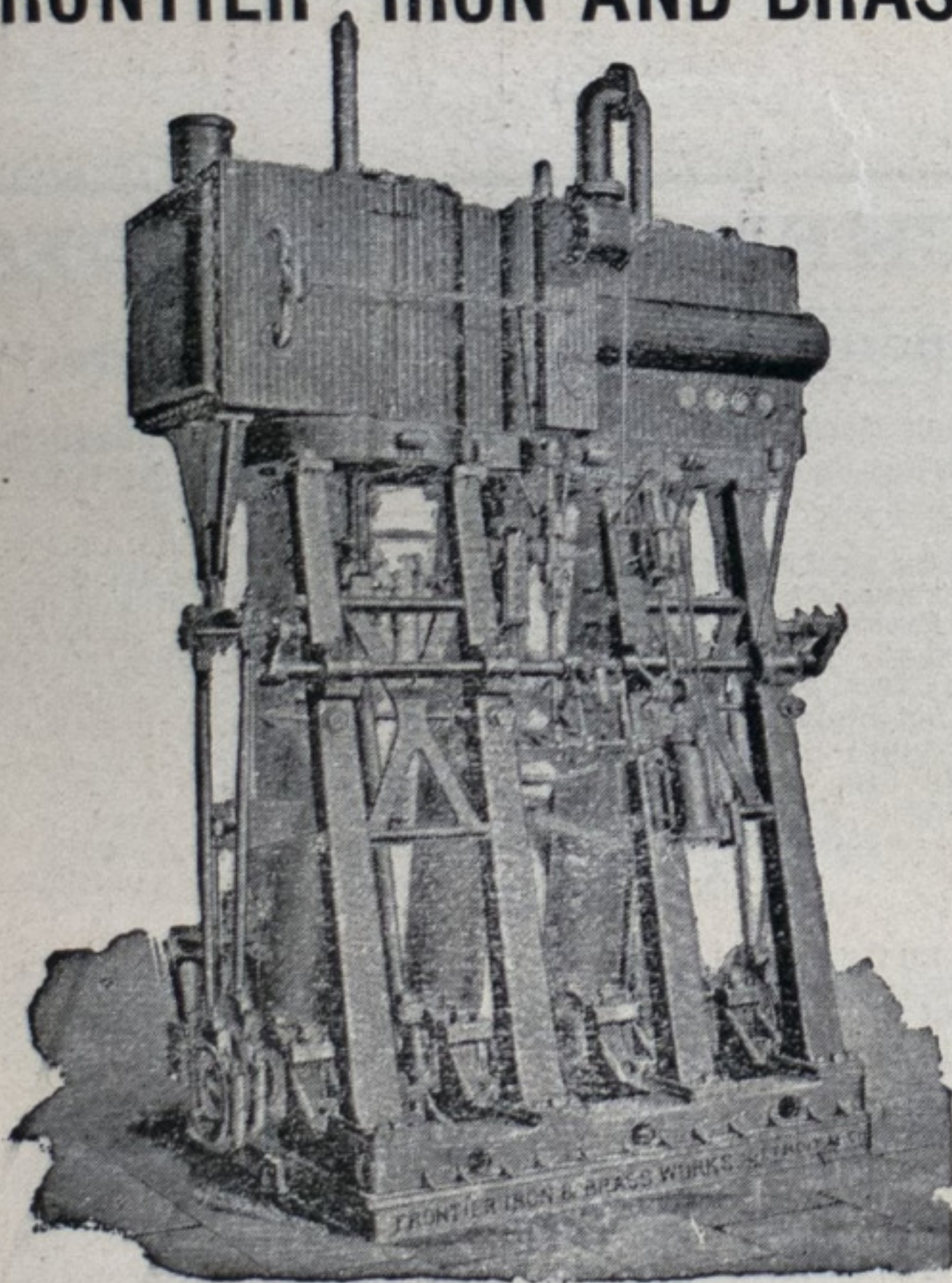
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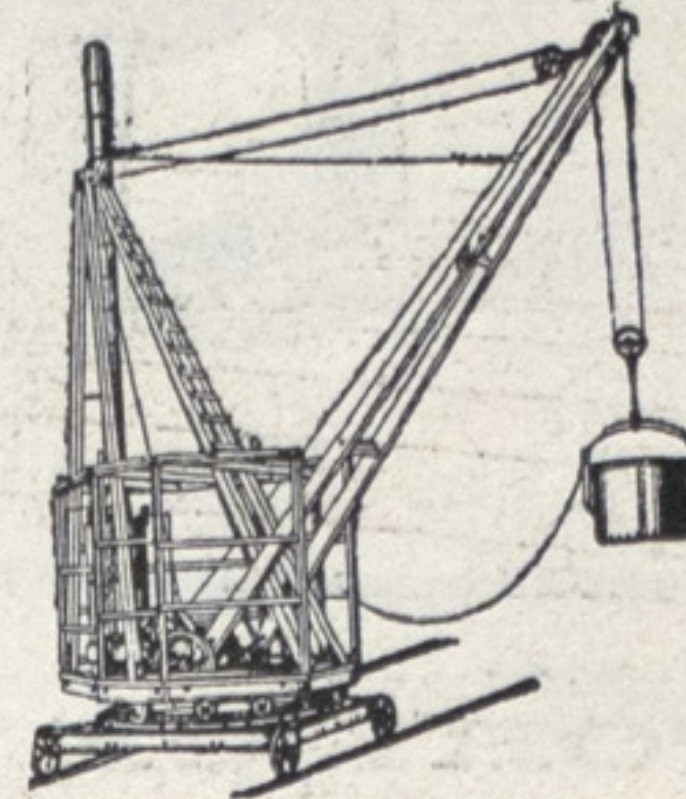
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Sole Manufacturers of the

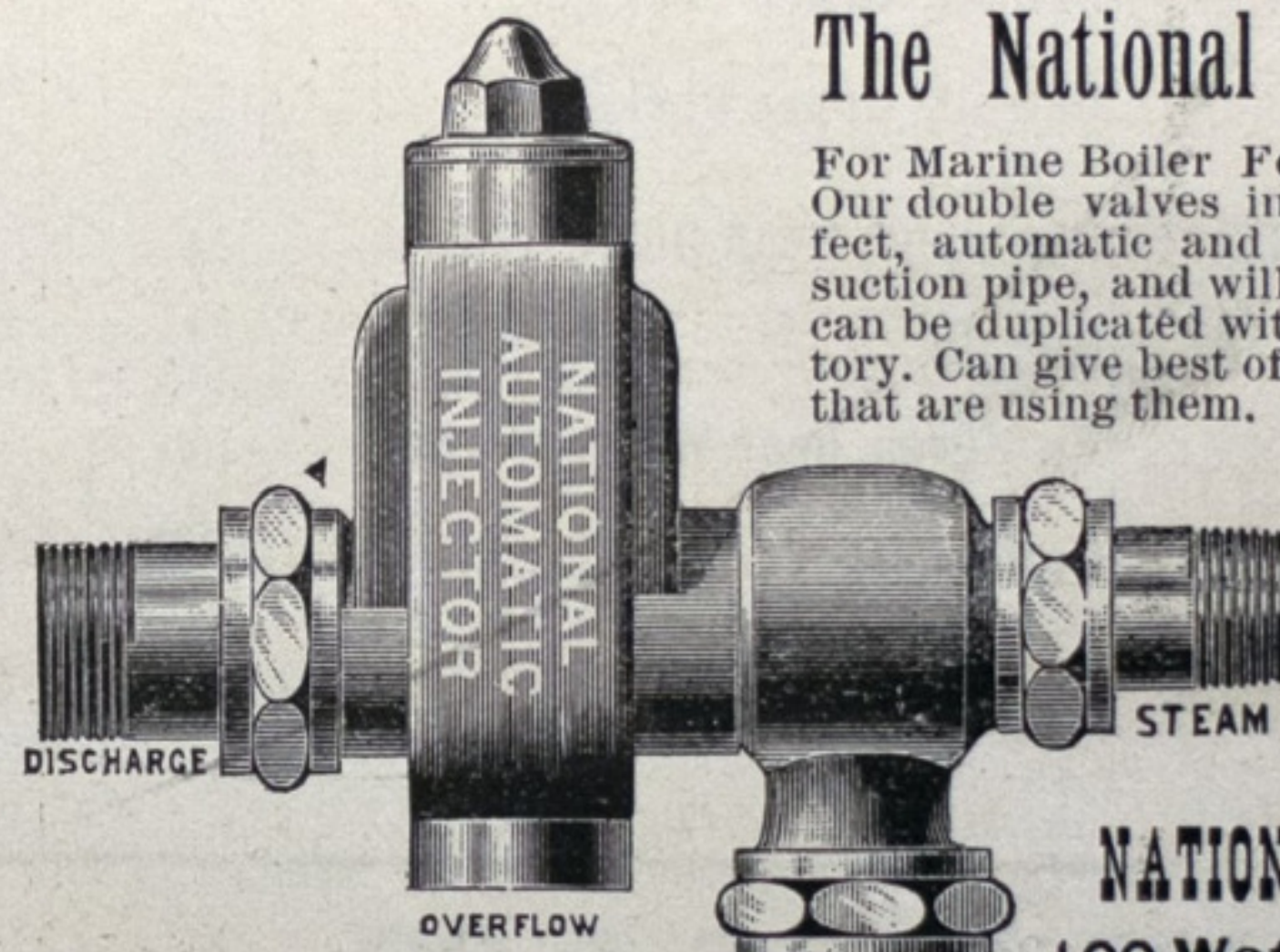
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KEYSTONE MARINE VALVE.These RED, AIR AND FOOT VALVES, are the
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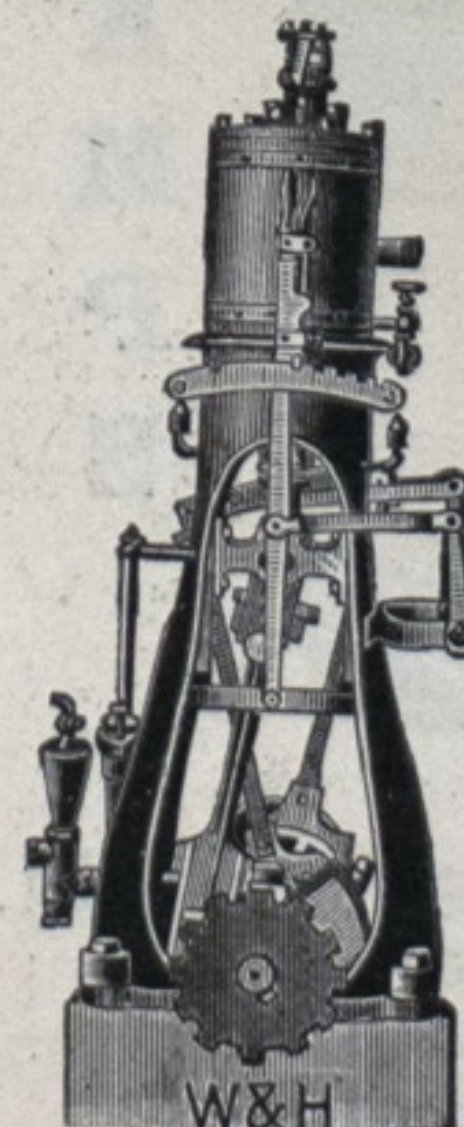
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